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REMARKS

Claims 1 - 6, 13 - 18, 25 and 27 are currently pending in the application. Claims 7-12, 19-24, and 26 have been canceled without prejudice or disclaimer as being drawn to a non-elected invention.

By this amendment, claims 1, 3, 5, 13, 15, 17, 25, and 27 are amended for the Examiner's consideration. The foregoing separate sheets marked as "Listing of Claims" shows all the claims in the application, with an indication of the current status of each.

In the specification, paragraph [0007] beginning at page 2, has been amended to make a typographical revision to change "vender" to read "vendor."

When the application is allowed formal drawings will be submitted.

Claims 1, 13, 25 and 27 are independent claims that express the basic features of auction methods and the related system of computing resources and the applicable computer readable storage medium for executing the methods **using computing resources**. That is, the phrase "computer-implemented" was included in the preamble of claims 1 and 27 to clearly state that the methods are to be implemented using computing technology. These two independent method claims were further amended to add the appropriate computing resource language to the particular steps within the body of the claims that utilize the computing resources. Claims 3 and 5, that depend on method claim 1, were also amended to include the same appropriate computer resource language of base claim 1 so as to agree with proper antecedent language.

Claim 13 was amended to designate that the system features were those of a system using computing resources as the means to perform the required functions set forth in the claim. Claims 15 and 17, that depend on method claim 13, were also amended to include the same appropriate computer resource language of base claim 1 so as to agree with proper antecedent language.

Claim 25 was also amended to specify that the computer-readable storage medium on which a program for holding an auction for a product is stored is enabling computing resources to perform processes which implement the method of the invention.

Claims 1, 13, 25 and 27 have also been amended to include the requirement that bids can include more than one product type. Specifically, the claims have been amended to include the phrase, “..for each product type **of multiple product types** in a transaction...” Claims 1, 13, 25 and 27 have been further amended to specify the final step, means, process and step, respectively, for the ordinary course of conducting an auction.

The amendments to these claims are fully supported by the specification which addresses the use of computing resources in several ways. The specification discusses the hardware and software elements of computing resources which are used in the invention. The specification further identifies the use of single or multiple computing resources to perform the method and to provide the means for performing the method. The specification also discusses the computer networking features of the inventions and describes these networking capabilities as utilizing the Internet but are not limited to the Internet as the only networking capability. Specifically, paragraph [0043] on page 12 states, “... permits a **computer** to carry out the functions of the auction method.” Paragraph [0053] states, “.. the present invention can be provided as **hardware, software**, or as a combination of hardware and software.” This clearly expressing the commonly understood elements of a computing system. The specification directly states the requirement for a computing system and the hardware elements of the computer system in paragraph [0054] which reads, “A **computer system** used for the embodiments of the invention comprises a central processing unit (CPU), a main memory (RAM: Random Access Memory) and nonvolatile memory (ROM: Read Only Memory), all of which are interconnected by a bus.” The networking aspect of the computing resources is specified in paragraph [0056] which

states, “ In the following embodiments, a **computer system using a computer network**, especially the Internet, is employed to implement the auction system of the invention. However, the invention is not limited to a computer network that uses the Internet, and a computer network may be employed that is constituted by a LAN, a WAN or a private line, or another computer network.” Numerous other paragraph can be cited such as paragraph [0057] which discusses implementing the invention across multiple computers and paragraph [0058] which discusses the use of the Internet as a network but clearly states that the Internet in not the only network across which the invention is intended to operate.

Within the course of an ordinary auction, bids are received, evaluated and the successful or desirable bid is **identified or accepted** from the bids received; in this instance from the subset of bids generated. This amendment is fully supported by the specification in numerous places. Specifically, the Abstract states, “...a subset of optimum bids are **selected...**” Selected being the same as “identified or accepted as required in the amended independent claims 1, 13, 25, and 27. Other places within the specification that speak to this final element of the auction are in paragraph [005] which again discusses the selection of a bid from a group of bids. Paragraph [0021] which states that an object of the invention is to determine a successful bidder; that is identify or accept a bid. Paragraph [0069] describes the successful bidder as that bidder or bidders that submitted bids that were selected from the subset of generated bids as providing the maximum gain to the vendor.

As for the amendment of the claims to include the concept of multiple products within each transaction, paragraph [0067] clearly identifies this features and states, ”...when **multiple types of products** are handled, bids are accepted for each product type...” Therefore, the amendment to the claims is fully supported by the specification and does not constitute new matter.

Claims 1 - 6 and 27 have been rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. This rejection is traversed.

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The amended claims 1 - 6 and 27 clearly require that the auction methods are to be performed using computing resources. These amendments are based on the specification which states the intention to utilize computing resources as discussed above. Thus, these claims should be in proper format for acceptance.

Claims 1 - 6, 13 - 18, 25 and 27 have been rejected under 35 U.S.C. 112, second paragraph as being unpatentable for indefiniteness. This rejection is traversed.

With respect to claims 13 - 18 and 25, the auction is held by receiving bids, "...from at least one computer or from multiple computers within a network of computers..." as identified in the amended claims. With the growth of such companies such as eBay®, Yahoo Auctions®, Ubid®, etc., the concept of computer based auctions and the capabilities associated with these types of auctions are commonly understood by average individuals. The invention is directed to how the best bid is selected relative to auction bids received for volume ranges of particular products or for particular conditions of the products. The invention does not attempt to nor it is seen as necessary to redefine the concept of on-line auction wherein auctions include the receipt of bids and the identification of a successful bidder. The subject invention is concerned with how the successful bidder is chosen. Therefore, the Examiners question as to how an auction is held is answered in two ways. First, the amended claims state that an auction is held by receiving bids within a computing resource environment. Second, the claims have been amended to include the final element (step, means or process as appropriate) that would occur in the ordinary course of an auction. That is, the auction includes the identification or acceptance of the successful bid from the subset of generated bids.

With respect to claims 1, 13, 25 and 27, these claims have been amended to use the correct antecedent language for the terms "the maximum gain" and "the count of said product..." These terms were used repeatedly in the specification (e.g., the maximum gain is described in paragraph [0068], [0089], and [0118]). The maximum gain is the sum of the evaluation prices. The evaluation prices are the per unit bid

price for each product configuration as described in the specification in paragraph [0030].

As for claims 3 - 6 and 15 - 17 the term $V(k,j)$ is described in paragraph [0010] on page 3 as the evaluation value array and is defined in the $(n+1) \times (s+1)$ space, with k denoting an integer of $1 \leq k \leq n+1$, and j , an integer of $0 \leq j \leq s$. The evaluation price is received as part of the bid information. These prices are used to populate the evaluation value array $V(k, j)$. The maximum value of the evaluation array is defined by the algorithm $V(k, j) := \max \{V(k+1, j), V(k, J+1), \max_{1 \leq k \leq n \leq h_k} \{V(k+1, j+x) + e_k(x)\}\}$ where

- where $V(k, j)$ denotes said two-dimensional array V populated with the evaluation prices.
- where $Q(k, j)$ denotes said two-dimensional array Q populated with said count of said product available for sale;
- k denotes an integer equal to or greater than 1 and equal to or smaller than n
- j denotes an integer equal to or greater than 0 and equal to or smaller than s
- n denotes the number of bids
- s denotes the number of products available for the transaction
- e_k denotes the evaluation price when x units of products are purchased
- b_k is the bid
- l_k denotes the minimum volume of the bid b_k
- h_k denotes the maximum volume of the bid b_k

as described in amended claim 3.

The array Q is defined in paragraph [0092] on page 28 as an array populated by recording the number of obtained products. That is, the various configurations that each set of products can form. This number of products is expressed in claim 1 as, "...count of said product available for sale..." The example used in the specification in paragraph [0018] has an uneven number of component products to form the requested, "... 200 to 300 sets of personal computers and display devices, 150,000 yen

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for each set" be permitted for targeted sales of 500 units of personal computers, 400 units of display devices, 300 units of printers, 200 sets of paper and 400 units of desks." Thus, the amended claims clearly define both V9k, j) and Q9K, j) and should now be in form for immediate approval.

Claims 1 - 6, 13 - 18, 25 and 27 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich (2003/0018560 A1). This rejection is traversed.

With respect to claims 1, 13, 25 and 27, Dietrich in paragraph [0023] constrains the user to **one single item per bid**. This is very different from the subject invention which enables a bidder to specify a variety of items across a range of quantities for each bid. In Dietrich, the bidder can add constraints upon the bid beyond that of price which can be linked to other bids. An example within Dietrich might allow a bidder wants to buy a table at a specified price. However, the bidder only wants the table if they can successfully bid for a set of chairs that have been requested using a separate bid. The bidder is only interested in the table and chairs if the total price for the two bids does not exceed a specified threshold. The bidder may be willing to pay more for the chairs if the table price is not as high as originally bid.

This is different from the subject invention which is trying to maximize the profit for the vendor of the products. Under some circumstances accepting the lower price for individual units may still maximize the overall profit for the vendor. This is accomplished by the feature that allows comparisons to be made of bids based on volumes of individual products requests within each bid. For example, if a bidder wishes to buy a 100 computers for \$100.00 per computer. The gross sale to the vendor is \$10,000.00. However, if another bidder wants to buy 100 computers at \$80.00 each and 50 printers at \$50.00 each. The gross sale is worth \$10,500.00 Assuming the cost to the vendor for each computer is \$75.00 and the cost of each printer is only \$25.00. The net profit for the computers only will be \$2,500.00 while net profit for computers and printers will be \$1,750.00 even though gross revenue is higher. Independent claims 1, 13, 25, and 27 have been specifically amended to

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include the requirement that bids are received **for each product type of multiple product types in a transaction** which is not provided by Dietrich as Dietrich restricts each bid to only one product type. The example presented here for the subject invention illustrates that the successful bid is based not just on the absolute bid price one a per product basis but on the maximum gain for the best combination of bids for the multiple product types.

With respect to the related arts cited by the examiner, the related art is expressly limited again to only one type of product. As stated in paragraph [0016] on page 4, “That is, when there is **only one type of product**, a bid designating more than one unit and evaluation price can be optimally selected (determined) using dynamic programming.” What the subject invention is addressing is the maximum gain when there are multiple product types within the bids. As Dietrich and the related art is drawn to auctions that have one product type per bid, there is no combination of Dietrich and the related art either individually or together that would result in the subject invention.

In view of the foregoing, it is requested that the application be reconsidered, that claims 1 - 6, 13 - 18, 25 and 27 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 (fax: 703-787-7557; email: mike@wcc-ip.com) to discuss any other changes deemed necessary in a telephonic or personal interview.

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If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account 50-0510 (IBM-Yorktown).

Respectfully submitted,



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